

AMENDMENTS TO THE CLAIMS

1-16. (Cancelled)

17. (Currently Amended) A window stack control method for managing a stack of a plurality of windows which are displayed on a display unit based on one or more application programs, the method comprising ~~the steps of:~~

receiving a request for newly creating a window from the application program;
designating a group of the window from the application program;
receiving a request for displaying the window from the application program; and
collectively arranging the window as a group so as to determine a stacking order of the window in the group ~~when displaying the window~~ in response to the display request, wherein ~~in the collectively arranging step,~~

a the stacking order of the window is determined so as to be consecutively followed by a stacking order of a the group to which the window ~~belong, with maintaining~~ belongs without altering respective stacking orders of ~~respective window~~ other groups of windows which have been collectively arranged as groups and without altering a stacking order of the groups of windows within the stack of windows.

18. (Currently Amended) The window stack control method according to claim 17, further comprising:

~~a step for~~ creating a representative window for each group; wherein
the collectively arranging ~~step~~ includes handling, when collectively arranging a window as a group so as to determine a stacking order of the window in the group, the window as a child window of the representative window.

19. (Currently Amended) The window stack control method according to claim 18, further comprising ~~the steps of:~~

receiving a request for shifting a top of a group in a the window stack ~~and or~~ a request for shifting a bottom of a group in a the window stack, from the application program; and

changing ~~the~~ a stack in the group in response to the request for shifting the top or the request for shifting the bottom.

20. (Currently Amended) The window stack control method according to claim 19, wherein

the ~~stack~~ changing ~~step~~ of the stack includes changing a the stack so as to collect, when receiving, from the application program, the request for shifting ~~the~~ a first window to a the top of a the group in a the window stack ~~and~~ or the request for shifting the first window to a the bottom of a the group in a the window stack, a first window group of windows which belong to a same group as the first window and which are not collectively arranged as a group and a second window group of windows which belong to a the same group as the first window and which have been collectively arranged as a group ~~with a stacking order in the first window group being maintained~~ such that ~~the~~ a stacking order of the first window group is not altered and is consecutively followed by a stacking order of the second window group.

21. (Currently Amended) The window stack control method according to claim 18, further comprising:

~~a step for~~ receiving a request for shifting a top ~~in units of group~~ the groups of windows in a the window stack ~~and~~ or a request for shifting a bottom ~~in units of group~~ the groups of windows in a the window stack, from the application program; and

~~a step for~~ changing ~~the stack in units of group~~ a stacking of the groups in response to the request for shifting the top or the request for shifting the bottom.

22. (Currently Amended) The window stack control method according to claim 21, wherein

the ~~stack~~ changing ~~step~~ of the stacking of the groups includes changing a the stack so as to collect, when receiving, from the application program, the request for shifting a first group to a the top ~~in units of group in a~~ of the groups of windows in the window stack ~~and~~ or the request for shifting a the first group to a the bottom ~~in units of group in a~~ of the groups of windows in the

window stack, a first window group of windows which belong to the first group and which are not collectively arranged as a group and a second window group of windows which belong to the first group and which have been collectively arranged as a group ~~with a stacking order in the first window group being maintained~~ such that the stacking order of the first window group is not altered and is consecutively followed by a stacking order of the second window group.

23. (Currently Amended) The window stack control method according to claim 21, wherein

an X window system and a window manager manage a the stack of a the plurality of windows, and a specific window is disposed immediately above a group at the top of the stack of windows.

24. (Currently Amended) The window stack control method according to claim 18, wherein

an X window system and a window manager manage a the stack of a the plurality of windows, and

the window manager confirms whether or not ~~its~~ a recognized stack conforms to a stack recognized by the window system when receiving a window destruction notification, and, ~~in the case of non-conformity~~ when the recognized stack of the window manager does not conform to the stack recognized by the window system, the window manager performs processing for conforming a the stack recognized by the window system to a the stack recognized by the window manager.

25. (Currently Amended) The window stack control method according to claim 18, wherein

an X window system and a window manager manage a the stack of a the plurality of windows, and

the window manager sets a flag when requesting the window system to change a the stack, and confirms whether or not ~~its~~ a recognized stack conforms to a stack recognized by the

window system only when the flag is set at ~~the~~ a reception of a window destruction notification, and, ~~in the case of non-conformity~~ when the recognized stack of the window manager does not conform to the stack recognized by the window system, the window manager performs processing for conforming a the stack recognized by the window system to a the stack recognized by the window manager, to thereby ~~to~~ put the flag down.

26. (Currently Amended) The window stack control method according to claim 17, further comprising ~~the steps of~~:

receiving a request for shifting a top of a group in a the window stack ~~and~~ or a request for shifting a bottom of a group in a the window stack, from the application program; and

changing ~~the~~ a stack in the group in response to the request for shifting the top or the request for shifting the bottom.

27. (Currently Amended) The window stack control method according to claim 26, wherein

the stack changing ~~step of the stack~~ includes changing a the stack so as to collect, when receiving, from the application program, the request for shifting a first ~~group~~ window to a the top ~~in units of the group in a the window stack~~ and or the request for shifting a the first ~~group~~ window to a the bottom ~~in units of the group in a the window stack~~, a first window group of windows which belong to ~~the first~~ a same group as the first window and which are not collectively arranged as a group and a second window group of windows which belong to the ~~first same group as the first window~~ and which have been collectively arranged as a group ~~with a stacking order in the first window group being maintained~~ such that ~~the~~ a stacking order of the first window group is not altered and is consecutively followed by a stacking order of the second window group.

28. (Currently Amended) The window stack control method according to claim 17, further comprising:

~~a step for~~ receiving a request for shifting a top ~~in units of group~~ the groups of windows in

a the window stack ~~and or~~ a request for shifting a bottom ~~in units of group~~ the groups of windows in a the window stack, from the application program; and

~~a step for changing the stack in units of group~~ a stacking of the groups in response to the request for shifting the top or the request for shifting the bottom.

29. (Currently Amended) The window stack control method according to claim 28, wherein

the ~~stack changing step of the stacking of the groups~~ includes changing a the stack so as to collect, when receiving, from the application program, the request for shifting a first group to a ~~the top in units of group in a~~ of the groups of windows in the window stack ~~and or~~ the request for shifting a the first group to a the bottom ~~in units of group in a~~ of the groups of windows in the window stack, a first window group of windows which belong to the first group and which are not collectively arranged as a group and a second window group of windows which belong to the first group and which have been collectively arranged as a group ~~with a stacking order in the first window group being maintained~~ such that the stacking order of the first window group is not altered and is consecutively followed by a stacking order of the second window group.

30. (Currently Amended) The window stack control method according to claim 28, wherein

an X window system and a window manager manage a the stack of a the plurality of windows, and a specific window is disposed immediately above a group at the top of the stack of windows.

31. (Currently Amended) The window stack control method according to claim 17, wherein

a window which is designated as a priority window by the application program is not caused to belong to any ~~group of the groups of windows~~ and the priority window is ~~caused to be~~ always disposed higher in the stack of windows than all ~~the~~ windows which are displayed on a display unit and which belong to any of the groups of windows.

32. (Currently Amended) The window stack control method according to claim 17, wherein
a window disposed lower in the stack of windows than a window belonging to a group at ~~the~~ a top of the stack of windows is always in a state of non-display.

33. (Currently Amended) The window stack control method according to claim 17, wherein
a specific window is disposed immediately below a window whose stacking order is ~~the~~ a bottom among windows belonging to a group at ~~the~~ a top of the stack of windows.

34. (Currently Amended) The window stack control method according to claim 17, wherein
an X window system and a window manager manage a the stack of a the plurality of windows, and
the window manager confirms whether or not ~~its~~ a recognized stack conforms to a stack recognized by the window system when receiving a window destruction notification, and, ~~in the case of non-conformity~~ when the recognized stack of the window manager does not conform to the stack recognized by the window system, the window manager performs processing for conforming a the stack recognized by the window system to a the stack recognized by the window manager.

35. (Currently Amended) The window stack control method according to claim 17, wherein
an X window system and a window manager manage a the stack of a the plurality of windows, and
the window manager sets a flag when requesting the window system to change a the stack, and confirms whether or not ~~its~~ a recognized stack conforms to a stack recognized by the window system only when the flag is set at ~~the~~ a reception of a window destruction notification,

and, ~~in the case of non-conformity~~ when the recognized stack of the window manager does not conform to the stack recognized by the window system, the window manager performs processing for conforming a the stack recognized by the window system to a the stack recognized by the window manager, to thereby ~~to~~ put the flag down.

36. (Currently Amended) The window stack control method according to claim 17, wherein

the collectively arranging ~~step~~ includes collecting, when a request for displaying a first window which is not collectively arranged as a group is received from the application program, the first window and a second window group of windows which belong to a same group as the first window and which have been collectively arranged as a group such that ~~the~~ a stacking order of the first window is consecutively followed by a stacking order of the second window group.

37. (Currently Amended) A window management program for managing a stack of a plurality of windows which are displayed on a display unit based on one or more application programs, the window management program being recorded on a computer readable medium, wherein a computer is operable to execute the steps of:

designating a group of a window from the application program;
receiving a request for displaying the window from the application program; and
collectively arranging the window as a group so as to determine a stacking order of the window in the group when receiving the display request,

wherein the stacking order of the window is determined so as to be consecutively followed by a stacking order of the group to which the window belongs without altering respective stacking orders of other groups of windows which have been collectively arranged as groups and without altering a stacking order of the groups of windows within the stack of windows.

38. (Currently Amended) A window management apparatus for managing, when displaying a plurality of windows on a display unit, a stack of the windows, comprising:

- one or more application programs for displaying one or more windows on the display unit;
- a window management program for managing a stack of the windows displayed by the one or more application programs; and
- a processing unit for executing the application programs and the window management program, wherein
 - the application program designates a group of a window with respect to the window management program, and
 - the window management program performs control, when receiving a request for displaying a window from the application program ~~and displaying the window~~, so as to collectively arrange the window as a group so as to determine a stacking order of the window in the group,

wherein the stacking order of the window is determined so as to be consecutively followed by a stacking order of the group to which the window belongs without altering respective stacking orders of other groups of windows which have been collectively arranged as groups and without altering a stacking order of the groups of windows within the stack of windows.